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STATE OF MONTANA

BULLETIN

OF THE

Department of Public Health

Vol. 6

March 15, 1914

No. 12

MONTANA STATE BOARD OF HEALTH

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State Bacteriologist,

ALLAN TUFFORD,

Consulting Architect.

M. L. MORRIS,

Consulting Sanitary Engineer.

HELENA, MONTANA.

Published Monthly at Helena, by the State Board of Health.

"The science of disease prevention, if properly applied, can add fifteen years to the present average length of human life."—Prof. Irving Fisher, Yale.

This Bulletin will be mailed monthly to any person in Montana upon request mailed to the Secretary of the State Board of Health at Helena.



The attention of the Profession throughout the State is called to the fact that we have in this office evidence, which if presented to the courts, would result in convicting many of the doctors of being guilty of not reporting cases of communicable disease.

While it would be exceedingly distasteful to this department to take action in these cases, it will be necessary to do so unless the law relative to the reporting of communicable diseases is complied with in the future.



A meeting of the health officers of the northern part of the State will be held at Havre on March the 23rd. An excellent program has been prepared and a large attendance is promised.

About the middle of April a meeting of the health officers of the western and southern portions of the State will be held at Missoula. We expect to have present at that meeting the men who are representing the Federal government in tick eradication work in the Bitter Root valley.



As there has been considerable controversy as to the constitutionality of the State law relative to vaccination, we print in this issue a Brief prepared by the Attorney General's office and submitted to the court in one of the cases now pending:

The authority of the State Board of Health to require the vaccination of school children as a condition precedent to the attendance at school, is conferred by the provisions of Section 1504, Revised Codes. This statute not only authorizes vaccination, but confers authority upon the State Board of Health to determine when such vaccination is necessary. Statutes of this character have been so universally sustained that it seems idle now to enter into a discussion of their constitutionality. The only decision we have found holding to a contrary doctrine is rather the method of reasoning implied by the Illinois Supreme Court in the case of *People vs. Chicago Board of Education*, 234 Illinois, 422, 84 N. W., 1046, 17 L. R. A. (M. S.), 709, and there the only question before the court for consideration was whether the charter granted to the city, conferring upon it authority "to promote the public health," was broad enough to sustain an ordinance making vaccination necessary as "a condition precedent to attendance of the public schools," and the court

held that more specific authority was needed before the municipality could legislate upon that subject, and to that extent.

But this question in all its phases, involving its constitutionality, the right of delegation to a Board of Health, and the proper manner of exercising such authority, was discussed by the Supreme Court of the United States, which decision and the authorities therein cited, are all the brief that can be required of the respondent to sustain this law. That case as reported in the United States Report, contains also a lengthy discussion from authorities and boards of investigation, of the effect of vaccination, and its general use in all the countries of Europe.

Jacobson vs. Mass. 197 U. S. 11.

The following cases are also directly in point:

Abell vs. Clark, 84 Cal. 226, 24 Pac. 393.

French vs. Davidson, 143 Cal. 658, 77 Pac. 663.

State vs. Salt Lake City Bd., 21 Utah, 401; 60 Pac. 1013.

Viemiester vs. White, 179 N. Y. 25; 72 N. E. 97;
84 N. Y., 712.

Bissel vs. Davison 65 Conn. 183; 32 Atlanta, 348.

Blue vs. Beech, 155 Ind., 121, 50 L. R. A., 64.

McSween vs. Trustees, 129 S. W. (Tex.) 206.

8Cyc. 1061.

21 Cyc. 393.

35 Cyc. 1117.



THE BRIDGE BUILDER.

An old man going a lone highway,
Came at the evening cold and gray,
To a chasm vast and deep and wide.
The old man crossed in the twilight dim,
The sullen stream had no fear for him;
But he turned when safe on the other side
And built a bridge to span the tide.

"Old man," said a fellow pilgrim near,

"You are wasting your strength with building here;

Your journey will end with the ending day,

You never again will pass this way;

You've crossed the chasm deep and wide,

Why build this bridge at evening tide?"

The builder lifted his old gray head—
“Good friend, in the path I have come,” he said,
“There followeth after me today,
A youth whose feet must pass this way.
This chasm that has been as naught to me,
To that fair-haired youth may a pitfall be;
He, too, must cross in the twilight dim—
Good friend, I am building this bridge for him!”

—Selected.



THE LAW OF ATTRACTION.

“Father, you were born in California, you say?”

“Yes, my son.”

“And mother was born in New York?”

“Yes.”

“And I was born in Indiana?”

“Yes, my son.”

“Well, father, don’t it beat the Dutch how we all got together?”—The Mother’s Magazine.



FORGOT TO TAKE ’EM OFF.

Some years ago, in a Western mining town, a man was found dead in his hotel room, hanged to a bed post by his suspenders. The jury of miners brought in the following verdict at the coroner’s inquest: “Deceased came to his death by coming home full and mistaking himself for his pants.”



CONTAGION.

Little George had heard a great deal said about disease germs, such as tuberculosis, etc. One day the family were at dinner, and George wanted a drink of water. The tired mother said:

“Drink out of your uncle’s glass, George; he is through eating.”

The little fellow commenced to cry, and said:

“I don’t want to; I’m afraid I will catch the backache.”—Eustis Lake Register.



I live in a constant endeavor to fence against the infirmities of ill-health and other evils, by mirth; I am persuaded that every time a man smiles—but much more when he laughs—it adds something to his fragment of life.—Sterne.

COMMUNICABLE DISEASES REPORTED TO THE
STATE BOARD OF HEALTH FOR THE MONTH
OF FEBRUARY, 1914.

Smallpox—Beaverhead, 1; Blaine, 1; Big Horn, 1; Cascade (Excl. of Gt. Falls), 8; Great Falls, 3; Carbon, 11; Chouteau, 4; Custer, 3; Dawson, 5; Deer Lodge, 1; Fergus, 31; Gallatin (Excl. of Bozeman), 2; Hill, 8; Lewis and Clark (Excl. of Helena), 7; Madison, 1; Missoula City, 3; Musselshell, 3; Park (Excl. of Livingston), 2; Livingston, 2; Powell, 1; Sanders, 2; Sheridan, 2; Silver Bow (Excl. of Butte), 11; Butte, 57; Billings, 12; Teton, 2; Total, 184. Total last month, 181.

Diphtheria—Broadwater, 1; Cascade (Excl. of Great Falls), 4; Great Falls, 2; Choteau 4; Custer, 4; Dawson, 4; Kalispell, 1; Galatin (Excl. of Bozeman), 1; Musselshell, 1; Powell, 1; Sheridan, 2; Teton, 1; Butte, 1; Stillwater, 1; Total, 28. Total last month, 22.

Scarlet Fever—Big Horn, 1; Cascade (Excl. of Great Falls), 1; Chouteau, 3; Great Falls, 4; Carbon, 7; Dawson, 1; Hill, 1; Madison, 1; Missoula County, 1; Musselshell, 5; Powell, 2; Rosebud, 5; Silver Bow (Excl. of Butte), 4; Butte, 3; Teton, 2; Valley, 4; Yellowstone (Excl. of Billings), 3; Billings, 6; Total, 54. Total last month, 78.

Typhoid Fever—Blaine, 5; Dawson, 1; Fergus, 1; Hill, 1; Powell, 1; Stilwater, 1; Sweet Grass, 1; Teton, 1; Total, 12. Total last month, 27.

Measles—Broadwater, 2; Big Horn, 7; Cascade (Excl. of Great Falls), 2; Great Falls, 55; Carbon, 249; Custer, 7; Dawson, 2; Fergus, 5; Hill, 8; Lewis and Clark (Excl. of Helena), 7; Helena, 40; Madison, 22; Musselshell, 9; Livingston, 1; Silver Bow (Excl. of Butte), 1; Butte, 7; Stillwater, 104; Sweet Grass, 4; Teton, 8; Yelowstone (Excl. of Billings), 16; Billings, 40; Total, 596. Total last month 1,142.

Whooping Cough—No cases reported. Last month, 12.

Tuberculosis—Fergus, 1; Teton, 2; Total, 3. Total last month, 12.

Epidemic Cerebro Spinal Meningitis—Sweet Grass, 1; Teton, 1; Total, 2. Total last month, 2.

**BIRTHS (EXCL. OF STILLBIRTHS) REPORTED TO THE STATE BOARD
OF HEALTH FOR THE MONTH OF FEBRUARY, 1914, AND
COMPARATIVE BIRTH AND DEATH RECORD IN THE STATE.**

	Males.....	Females.....	Totals.....	Deaths.....	Excess of Births.....	Excess of Deaths.....
Beaverhead,	5	7	12	...	12	..
Broadwater,	1	1	2	7	..	.. 5
Carbon,	20	20	40	21	19	..
Cascade (Excl. of)	13	8	21	6	15	..
Great Falls,	18	18	36	42	...	.. 6
Chouteau,	2	1	3	5	...	.. 2
Custer,	16	18	34	9	25	..
Dawson,	15	25	40	13	27	..
Deer Lodge (Excl. of)	3	1	4	14	...	.. 10
Anaconda,	6	6	12	13	7	..
Fergus,	15	12	27	7	20	..
Flathead (Excl. of)	12	4	16	7	9	..
Kalispell,	8	7	15	10	5	..
Gallatin (Excl. of)	10	8	18	9	9	..
Bozeman,	10	3	13	6	7	..
Granite,	2	5	7	3	4	..
Jefferson,	4	...	4	...	4	..
Lewis and Clark (Excl. of)	5	9	14	7	7	..
Helena,	10	4	14	12	2	..
Lincoln,	5	5	10	...	10	..
Madison,	3	1	4	4	...	..
Meagher,	8	5	13	4	9	..
Missoula (Excl. of)	7	9	16	6	10	..
Missoula City,	11	10	21	15	6	..
Musselshell,	14	10	24	13	11	..
Park (Excl. of)	4	1	5	3	2	..
Livingston,	6	3	9	5	4	..
Powell,	9	3	12	6	6	..
Ravalli,	7	7	14	6	8	..
Rosebud,	4	3	7	5	2	..
Sanders,	3	2	5	1	4	..
Silver Bow (Excl. of)	17	25	42	30	12	..
Butte,	40	30	70	56	34	..
Sweet Grass,	5	2	7	3	4	..
Teton,	15	17	32	6	26	..
Valley,	8	7	15	6	9	..
Yellowstone (Excl. of)	10	11	21	6	15	..
Billings,	10	14	24	13	11	..
Big Horn, .....	...	1	1	...	1	..
Blaine,	8	5	13	7	6	..
Fallon,	2	5	7	...	7	..
Hill,	14	17	31	7	24	..
Sheridan,	7	13	20	4	16	..
Stillwater,	3	2	5	1	4	..
Totals,	395	365	760	398	413	23

Stillbirths—29.

**DEATHS (EXCLUSIVE OF STILLBIRTHS*) REPORTED TO THE STATE
BOAR DOF HEALTH FOR THE MONTH OF FEBRUARY, 1914, AR-
RANGED ACCORDING TO COUNTIES AND PRINCIPAL CITIES.**

	Totals	All Other Causes	Alcoholism	Suicide	Violence	Acute Intestinal Diseases	Malignant Tumors	Organic Heart Disease	Nephritis	Pneumonia	Whooping Cough	Measles	Scarlet Fever	Diphtheria	Tuberculosis	Small Pox	Spotted Fever
Beaverhead,	1	1															
Broadwater,	7	7															
Carbon,	21	21															
Cascade (Excl. of)	6	6															
Great Falls,	42	42															
Chouteau,	5	5															
Custer,	3	3															
Dawson,	13	13															
Deer Lodge (Excl. of)	14	14															
Anaconda,	13	13															
Fergus,	7	7															
Flathead (Excl. of)	10	10															
Kalispell,	9	9															
Gallatin (Excl. of)	6	6															
Bozeman,	3	3															
Granite,	1	1															
Jefferson,	4	4															
Lewis and Clark (Excl. of)	12	12															
Helena,	4	4															
Lincoln,	2	2															
Madison,	4	4															
Meagher,	4	4															
Missoula (Excl. of)	6	6															
Missoula City,	15	15															
Musselshell,	13	13															
Park (Excl. of)	3	3															
Livingston,	5	5															
Powell,	6	6															
Ravalli,	1	1															
Rosebud,	5	5															
Sanders,	1	1															
Silver Bow (Excl. of)	30	30															
Butte,	56	56															
Sweet Grass,	3	3															
Teton,	6	6															
Valley,	6	6															
Yellowstone (Excl. of)	6	6															
Billings,	13	13															
Big Horn,	7	7															
Blaine,	3	3															
Fallon,	4	4															
Hill,	7	7															
Sheridan,	4	4															
Stillwater,	1	1															
Total,	398	398	3	3	8	17	17	16	16	16	3	5	1	1	1	34	1

Estimated Population,—420,000.

Annual Death Rate per 1,000 Population,—11.36.

Monthly Death Rate per 1,000 Population,—.947.

REPORT OF BACTERIOLOGICAL EXAMINATIONS
MADE DURING THE MONTH OF FEBRUARY, 1914,
BY EMIL STARZ, BACTERIOLOGIST.

February 1, 1914:

Dr. M. Dean, Helena, Montana. Sputum for B. Tuberc:
Negative.

February 2, 1914:

Dr. Hathaway, Glendive, Montana. Blood for Widal Re-
action: Positive.

February 4, 1914:

Dr. J. F. Murphy, Fort Benton, Montana. Two swabs for
Bac. Diphtheria: Positive.

February 6, 1914:

Dr. B. V. McCabe, Helena, Montana. Blood for Widal Re-
action: Positive.

Dr. J. H. Gauss, Lewistown, Montana. Blood for Widal:
Positive.

Dr. J. G. Thompson, Helena, Montana. Blood for Widal
Reaction: Negative.

February 7, 1914:

Dr. J. F. Murphy, Fort Benton, Montana. Nine swabs for
Diphtheria Bac.: Negative.

Dr. Tice, Two Dot, Montana. Pleural fluid for Bac. Tubercu-
losis: Negative.

Dr. R. E. Hathway, Glendive, Montana. Blood for Widal
Reaction: Positive.

Dr. M. G. Danskin, Glendive, Montana. Blood for Widal
Reaction: Positive.

Dr. J. F. Murphy, Fort Benton, Montana. Swab for Diph-
theria Bac.: Negative.

Dr. W. T. Thornton, Stevensville, Montana. Blood for
Widal Reaction: Positive.

Dr. A. J. Movius, Billings, Montana. Culture for susp. Bac.
Diphtheria: Negative.

February 9, 1914:

Dr. R. C. Holgate, Manhattan, Montana. Swabings from
throat for B. Diphtheria: Positive.

Dr. A. C. Spooner, Blainville, Montana. Pus for Bac. Tuberc.
Negative.

Dr. Helena C. Roberts, Great Falls, Montana. Culture for
Bac. Diphtheria: Positive.

Dr. Porter, Fort Benton, Montana. Culture for Bac. Diphtheria: Negative.

Dr. Dent, East Helena, Montana. Pus for Bac. Tuberculosis: Negative.

Dr. J. F. Murphy, Fort Benton, Montana. Swabings for Bac. Diphtheria: Negative.

Dr. E. M. Porter, Fort Benton, Montana. Culture for Bac. Diphtheria: Negative.

February 11, 1914:

Dr. McCabe, Helena, Montana. Blood for Widal: Negative.

Dr. I. F. Murphy, Fort Benton, Montana. Three swabings from throats for Bac. Diphtheria: Two Streptococci; One Staphylococci.

February 12, 1914:

Dr. Beagle, Sidney, Montana. Sputum from Bac. Tuberc.: Negative.

Dr. R. H. Beach, Glendive, Montana. Blood for Widal Reaction: Positive.

Dr. W. P. Smith, Columbus, Montana. Blood for Widal: Negative.

Dr. P. O'Malley, Chinook, Montana. Blood for Widal Reaction: Positive.

Dr. A. V. Blackstone, Absarokee, Montana. Blood for Widal Reaction: Positive.

Dr. W. T. Thornton, Stevensville, Montana. Blood for Widal Reaction: Positive.

February 14, 1914:

Dr. W. T. Thornton, Stevensville, Montana. Culture: Staphylococci-pyogenesaureus.

Dr. L. Fligman, Helena, Montana. Sputum for Bac. Tuberc.: Negative.

Dr. W. T. Thornton, Stevensville, Montana. Culture: Staphylococci.

February 15, 1914:

Dr. Hulbush, Cutbank, Montana. Culture for Bac. Diphther: Negative.

Dr. W. P. Smith, Columbus, Montana. Blood for Widal Reaction: Positive.

February 16, 1914:

Dr. G. M. Crabb, Deer Lodge, Montana. Blood for Widal Reaction: Positive.

Dr. C. C. Seerley, Manhattan, Montana. Slide for Bac. Diphtheria: Negative.

Dr. W. C. Riddell, Helena, Montana. Cerebrospinal fluid: Meningococci.

February 17, 1914:

Dr. Sproule, Harlem, Montana. Blood for Widal: Positive.

February 18, 1914:

Dr. Ph. Cole, Helena, Montana. Sputum for Bac. Tuberculosis: Negative.

Dr. Geo. Coil, Ashland, Montana. Sputum for Bac. Tuberc.: Negative.

February 19, 1914:

Dr. W. C. Riddell, Helena, Montana. Cerebrospinal fluid: Meningococci.

Dr. M. Dean, Helena, Montana. Blood for Widal: Negative.

Dr. Ritchey, Townsend, Montana. Culture for Diphtheria Bac.: Positive.

February 20, 1914:

Dr. A. T. Gilhus, Gilt Edge, Montana. Sputum for Tuberc. Bac.: Positive.

February 22, 1914:

Dr. Hugh McMillan, Dillon, Montana. Blood for Widal: Negative.

Dr. C. Wilder, Benchland, Montana. Blood for Widal: Positive.

February 24, 1914:

Dr. A. P. O'Leary, Big Timber, Montana. Blood for Widal: Positive.

Dr. Sprule, Harlem, Montana. Blood for Widal: Negative.

Dr. G. H. Nichols, Lewistown, Montana. Sputum for Bac. Tub.: Negative.

February 25, 1914:

Dr. W. Sproule, Harlem, Montana. Blood for Widal: Positive.

February 26, 1914:

Dr. W. P. Smith, Columbus, Montana. Blood for Widal: Negative.

Dr. J. Wernham, Billings, Montana. Culture for Bac. Diphtheria: Positive.

Dr. B. V. McCabe, Helena, Montana. Sputum for Bac. Tuberc.: Positive.

Dr. E. M. Porter, Fort Benton, Montana. Blood for Widal: Negative.

February 27, 1914:

Dr. J. Treacy, Helena, Montana. Smear for Diphtheria Bac. Negative.

Dr. W. Sproule, Harlem, Montana. Blood for Widal: Negative.

February 28, 1914:

Dr. A. P. O'Leary, Big Timber, Montana. Blood for Widal: Negative.

Respectfully submitted,

EMIL STARZ,
Bacteriologist.



DIVISION OF FOODS AND DRUGS.

Dr. W. F. Cogswell, Secretary State Board of Health,
Food and Drug Commissioner.

F. J. O'Donnell, Inspector.

LABORATORY STAFF.

W. M. Cobleigh, Chemist.

D. L. Weatherhead, Analyst.

D. B. Swingle, Bacteriologist.

Carl Gottschalck, Assistant Analyst.

Nina Armstrong, Clerk and Stenographer.

LABORATORY REPORT.

Samples Reported During February.

Classification.	Number Legal	Number Illegal	Unofficial	Total
Butter (Dairy Comission)	4	26	2	32
Milk (Dairy Commission)	11	5	..	16
Butter (Board of Health)	2	2	..	4
Cream (Board of Health) .....	..	..	1	1
Milk (Board of Health)	7	4	6	17
Soft Drinks,	27	6	..	33
Water, .....	..	..	..	26
Miscellaneous, .....	..	..	..	6
Total,	51	43	9	135

Eighty-seven samples were reported to the Secretary of the State Board of Health, during the month of February. Of this number, four were samples of butter, one of cream, seventeen of milk, thirty-three of soft drinks, twenty-six of water and six were of a miscellaneous character.

Of the four samples of butter, two were standard, while two were below the legal standard in content of fact.

There was one sample of cream and seventeen samples of milk. Seven of these were unofficial as the samples were not sent under seal and were not accompanied by inspector's cards. Of the other eleven, two samples of milk were below standard in fact and two were below standard in solids not fat.

Thirty-three samples of soft drinks were examined for saccharin. None were found to contain it.

Of the six miscellaneous samples, two were samples of carbonated water, two were samples of bleaching powder, and two of bleaching powder solution. One of the carbonated waters

was passed while one was considered misbranded. The bleaching powders and solutions were analyzed for informational purposes.

The twenty-six samples of water reported were collected as follows:

Baker,	1
Billings,	6
Bozeman,	1
Columbus,	9
Livingston,	6
Medicine Lake,	2
Poplar,	1

Total, 26

A more detailed report of the official food samples follows:

BUTTER.

Lab. No.	Date.	Description.	Remarks.
2775	2-18-14	Butter: On label: Lincoln Brand, Creamery Butter, contents 16 ozs. Dealer: Yegen Bros., Billings, Montana. Manf. by Beatrice Creamery Co., Lincoln, Nebraska,	Low in fat; Misbranded as to weight.
2776	2-18-14	Butter. On label: Quality Butter, 16 ozs. Dealer: Yegen Bros., Billings, Mont. Manf. by Powell Creamery Co., Powell, Wyoming,	Low in fat; Misbranded as to weight
2777	2-18-14	Butter. On label: Blanchard Butter, 16 ozs. gross 15 ozs. net when packed. Dealer: Yegen Bros., Billings, Mont. Manf. by Henningsen Produce Company, Billings, Montana..	Complies with the standard.
2778	2-18-14	Butter. On label: Ferndale, Butter, 16 ozs. gross 15 ozs. net, when packed, Yellowstone Creamery Co., Billings, Mont. Dealer: Yegen Bros. Inc., Billings, Montana. Manf. by Henningsen Produce Company, ...	Complies with the standard.

MILK
Standard or Above.

Lab. No.	Date.	Obtained From	Town.	Total Solids.	Solids Not Fat.	Fat.
2808	2-13-14	Wm. Enos,	Great Falls	13.45%	9.45	4.00
2809	2-13-14	E. W. Peck,	Great Falls	12.76%	9.16	3.60
2810	2-13-14	O. E. Hales,	Great Falls	12.96%	8.96	4.00
2811	2-13-14	Martin Ryested Springdale Dairy,	Great Falls	13.28%	9.08	4.20
2812	2-13-14	Owen Lande,	Great Falls	11.94%	8.69	3.25
2813	2-13-14	G. O. Anderson,	Great Falls	12.47%	8.57	3.90
2817	2-13-14	H. B. Mitchell,	Great Falls	12.41%	8.81	3.60

MILK
Below Standard.

Lab. No.	Date.	Obtained From	Town.	REMARKS.
2806	2-13-14	W. A. Rutan,	Great Falls	Low in solids not fat.
2807	2-13-14	D. Mitchell,	Great Falls	Low in fat.
2814	2-13-14	Axel Ittig,	Great Falls	Low in solids not fat.
2816	2-13-14	J. B. McIver,	Great Falls	Low in fat.

SOFT DRINKS

Lab. No.	Date.	Description.	Remarks.
2789	2-23-14	Strawberry Soda. On label: Strawberry Soda, Artificial Color and Flavor. Bottled by St. Louis Bottling Works. Nick Baatz, Prop., Great Falls, Montana,	Contains no saccharin.
2790	2-23-14	Raspberry Soda. On label: Artificial Color and Flavor, Raspberry Cider, Sparkling, Delicious. Bottled by St. Louis Bottling Works. Nick Baatz, Prop., Great Falls, Montana, ...	Contains no saccharin.
2791	2-23-14	Lemon Soda. On label: Lemon Soda, Artificial Color and Flavor, bottled by the St. Louis Bottling Works. Nick Baatz, Prop., Great Falls, Montana,...	Contains no saccharin.
2792	2-23-14	Coco Cola. On label: Coco Cola, Bottled under the Authority of the Coco Cola Co., Atlanta, Ga. Retailer, Nick Baatz, Great Falls, Montana,	Contains no saccharin.
2793	2- 9-14	Root Beer. On label: Root Beer, Superior Quality, Sparkling, Delicious, Color, Flavor. Contents 12 ozs. Bottled by the St. Louis Bottling Works, Nick Baatz, Prop., Great Falls, Montana,	Contains no saccharin.
2794	2-23-14	Cream Soda. On label: Cream Soda, Artificial Colored and Flavored. Bottled by the St. Louis Bottling Works, Nick Baatz, Prop., Great Falls, Montana,	Contains no saccharin.
2795	2-23-14	Ginger Ale. On label: Ginger Ale, Bottled by Chas. Gies, Great Falls, (Sticker on bottom) This package contains 12 ozs.,	Misbranded as to volume. Contains no saccharin.
2796	2-23-14	Strawberry Soda. On label: Strawberry. Bottled by Chas. Gies, Great Falls, Montana. (Sticker on bottom) This Package Contains 12 ozs., ...	Misbranded, as to volume. Contains no saccharin.
2797	2-23-14	Root Beer. On label: Root Beer. (On cap) Root Beer Artificial color and flavor. Bottled by Chas. Gies, Great Falls, Montana,	Contains no saccharin.
2798	2-23-14	Raspberry Soda. On label: Raspberry, bottled by Chas. Gies, Great Falls, (Sticker on bottom) This Package Contains 12 ozs.,	Misbranded, as to volume. Contains no saccharin.
2800	2-23-14	Lemon Soda. On label: Lemon Soda, Bottled by Chas. Gies, Great Falls, (Sticker on the bottom) This Package Contains 12 ozs. (On cap) Lemon Soda, Artificial Color and Flavor,	Misbranded, as to volume. Contains no saccharin.

(Soft Drinks—Continued.)

2801	2-23-14	Root Beer. On label: Root Beer. Bottled by R. Jorgenson, Great Falls, Montana,	Contains no saccharin.
2802	2-23-14	Lemon Soda: On label: Sparkling Lemon Soda, (On cap) Lemon Soda, Artificial Color and Flavor. Bottled by R. Jorgenson, Great Falls, Mont.	Contains no saccharin.
2803	2-23-14	Cream Soda. On label: Cream Soda, Delicious Colored and Flavored, (On cap) Cream Soda, Artificial Color and Flavor. Bottled by R. Jorgenson, Great Falls, Montana....	Contains no saccharin.
2804	2-23-14	Ginger Ale. On label: Golf, Ginger Ale, the Best of All, (On cap) Ginger Ale, Artificial Color and Flavor. Bottled by R. Jorgenson, Great Falls, Mont.	Contains no saccharin.
2805	2-23-14	Strawberry. On label: Strawberry, Artificial Color and Flavor. Bottled by R. Jorgenson, Great Falls, Montana.	Contains no saccharin.
2838	2-23-14	Grape Soda. On label: No label (On cap) Grape, Artificial Color and Flavor. Bottled by Henry Greenhood Company, Missoula, Montana,	Contains no saccharin.
2839	2-23-14	Raspberry Soda. On label. (On cap) Artificial Color and Flavor. Raspberry, Bottled by Henry Greenhood Co., Missoula,	Contains no saccharin.
2840	2-23-14	Champagne Cider. No label. (On cap) Champagne Cider, Artificial Color and Flavor. Bottled by Henry Greenhood Company, Missoula, Montana.	Contains no saccharin.
2841	2-23-14	Orange Cider. No label. (On cap) Orange Cider Artificial Color and Flavor. Bottled by Henry Greenhood Company, Missoula, Mont....	Contains no saccharin.
2842	2-23-14	Wyss Celery Phosphate. On label: Wyss' Celery and Phosphate, Artificially Colored, a wonderful tonic and a delicious non-alcoholic beverage. Henry Greenhood Company, Missoula,	Contains no saccharin.
2843	2-23-14	Apple Cider. No label. Bottled by Henry Greenhood Company, Missoula, Montana,	Contains no saccharin.
2844	2-23-14	Grape Juice. No label. Bottled by Henry Greenhood Company, Missoula, Montana, ...	Contains no saccharin.
2846	2-23-14	Ginger Ale. No label. (On cap) Ginger Ale, Artificial Color and Flavor. Manf. by Henry Greenhood Co., Missoula,	Contains no saccharin.
2847	2-23-14	Lemon Soda. No label. (On cap) Lemon Soda, Artificial Color and Flavor. Bottled by Henry Greenhood Company, Missoula, Montana,	Contains no saccharin.

(Soft Drinks—Continued.)

2848	2-23-14	Strawberry Soda. No label; (On cap) Strawberry Artificial color and Flavor. Bottled by Henry Greenhood Company, Missoula, Montana,	Contains no saccharin.
2849	2-23-14	Sarsaparilla. No label; (On cap) Sarsaparilla, Artificial Color and Flavor. Bottled by Henry Greenhood Company, Missoula, Montana,	Contains no saccharin.
2850	2-23-14	Cream Soda. No label: On cap, Cream Soda, Artificial Color and Flavor. Bottled by Henry Greenhood Company, Missoula, Montana,	Sample contains no saccharin.
2851	2-23-14	Cream Soda. On cap: Cream Soda Artificially Colored and Flavored; contains 24 ozs. Bottled by J. E. Power,	Misbranded, as to volume. Contains no saccharin.
8252	2-23-14	Lemon Soda. On label: Lemon Soda, manf. by J. E. Power, Missoula; (On cap) Artificial Color and Flavor. Lemon Soda	Contains no saccharin.
2853	2-23-14	Ginger Ale. On label: Ginger Ale, Artificially Colored and Flavored. Manf. by J. E. Power; Contains 24 ozs.,	Misbranded, as to volume; Contains no saccharin.
2854	2-23-14	Strawberry Soda. On label: Imitation Strawberry, Manf. by J. E. Power, Missoula, contains 24 ozs.,	Contains no saccharin.
2855	2-23-14	Orange Cider. No label, (On cap) Orange Cider, Artificial Color and Flavor. Manf. by J. E. Power, Missoula, Mont..	Contains no saccharin.

MISCELLANEOUS

Lab. No.	Date.	Description.	Remarks.
2788	2-23-14	Artificial Mineral Water. On Label: Reichs' Quellen Selter's Artificial Mineral Water. St. Louis Bottling Works, Great Falls, Montana. Nick Baatz, Prop.,	Passed.
2799	2-23-14	Carbonated Water. On label: Parallel Carbonated Water, Distilled and Carbonated by Parallel Mineral Water Co. This Package Contains 12 ozs. Bought From Chas. Gies, Great Falls, Montana,	Misbranded; contains less than 12 ozs. and is not distilled water.
2821	2-10-14	Bleaching Powder, sent in by Billings Water Company,	Available chlorine, 37.94%.
2822	2-10-14	Bleaching Powder Solution, sent in by Billings Water Company	Available chlorine, 0.43%.
2828	2-12-14	Bleaching Powder sent in by Billings Water Company,	Available chlorine, 37.66%
2829	2-12-14	Bleaching Powder Solution sent in by Billings Water Company	Sample lost.

FOODS RETAILED BY WEIGHT.

We found that often a sample of butter or some other package goods is sold to an inspector as being of a certain weight or measure when such package is plainly labelled by the manufacturer to be of a different capacity. For instance a package of butter is sold as "one pound" when it is plainly labelled with "net wt." 15 ozs., or some similar legend. Doubtless, when butter is ordered by a customer a pound is asked for and "a pound" sold in the same manner. It may not be out of place to quote from the Dairy Law and the Food and Drug Act some sections bearing on this subject:

Section 20, of the Montana Dairy Act reads as follows:

. Any person, persons, firm or corporation, selling or offering for sale any article of dairy products as a pound or any multiple thereof, the net weight of which is less than sixteen ounces, or the proper multiple thereof, to represent the number of pounds sold or offered for sale, shall be guilty of a misdemeanor,"

Section 5 of the Montana Food and Drug Act reads in part as follows:

" Any person, persons, firm or corporation selling or offering for sale any article of food as a pound, or any multiple thereof, except by actual weight, the net weight of which is less than sixteen ounces, or the proper multiple thereof to represent the number of pounds sold or offered for sale, shall be guilty of a misdemeanor."

There are other laws dealing with weights and other sections of these same laws which deal with weights, etc., and labelling, but the above sections are cited here to point out the fact that a merchant who retails an article in package form should sell it for the weight the manufacturer represents it to contain, otherwise, he himself is liable under the law.

It may also be pointed out that if the consumers really wish to receive butter put up in one pound packages, all that is necessary for them to do is to insist on their grocer sending them a brand containing sixteen ounces to the package and not "between 15 and 16 ounces, net," 16 ozs. gross or more, 15 ozs. net," etc., and this also holds true with other kinds of food sold in packages since the Weights and Measures Law now requires that all food products sold in package form must bear a label setting forth the net content.

RURAL SANITATION AND HYGIENE.

Writing in the Medical Record of January 24th, Dr. J. A. Nydegger comments upon the grave lack of proper hygienic and sanitary conditions in rural districts. There is, of course, a very good reason why the rural communities are not as far advanced in this respect as the cities. They are quite distant from the centers of activity along the health lines, but it would appear that in addition to the dangers of disease to the rural population, these conditions have a very definite bearing upon the health of the cities receiving the output of the rural districts in their vicinity. For this reason, in addition to the advisability of protecting health conditions upon the farm, it is highly essential that health authorities in general should give more thought to this question of rural sanitation. The problem is a difficult one, due partly to lack of interest on the part of the rural population itself. Typhoid fever, for instance, is mainly a country disease. Pollution from insanitary privies and also the improper handling of refuse from the barn, provide breeding places for flies, which convey disease to the inhabitants and they in turn carry the infections to the cities when delivering their products. Hookworm disease, particularly in the south, is spread through the improper disposal of fecal material. The location of wells and privies is in the majority of instances at improper distances from the house. Farm sewage is almost invariably improperly disposed of. A vigorous campaign of education should be carried on in rural districts as well as in the urban. Farmers should be taught the principles of hygiene and sanitation. Low ground in the vicinity of the farm should be properly drained to prevent the breeding of mosquitoes. Many other conditions effect the health of farmers. Bad lighting has an injurious effect; improperly cooked foods should also be given considerable attention. The proper location of the farm house so as to obtain the maximum of sun light is another problem. This relates particularly to the question of dampness. The proper care of the sick on the farm should be given considerable attention, especially as to the question of liability of infection to others.

There is no question but that the scope of health work should be extended to include these rural communities and it is to be hoped that some effective measures along this line will soon be under way.

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Ohio State Board of Health.

February, 1914.

DISINFECTION OF PUBLIC WATER SUPPLIES IN MONTANA.

Many of the cities of Montana are supplied with water taken from mountain streams above human habitations. These water supplies as a rule, are above suspicion from the sanitary standpoint. However, it has been pointed out in these columns that pure mountain streams soon become contaminated as they flow through the valleys, which they drain. In many instances the contamination comes from both city sewage and the drainage from the watersheds.

Cities that must take water supplies from these contaminated streams should install some satisfactory method of purification before the contamination reaches a point that it is a menace to health. From the fact that the surface waters in question are more or less turbid during a part of each year it appears that some form of sand filtration would be the most satisfactory method of purification. Cities using this method could have a safe, clear, sparkling water and one that would be safe for drinking.

However, it became apparent that some of the public water supplies should receive some form of purification at an early date. The installation of a sand filtration plant requires considerable time even after a city has voted to adopt this plan of water purification. Consequently, on the advice of the State Board of Health, a few hypochlorite disinfection plants have been installed to treat the raw unfiltered water. It should be understood that hypochlorite does not remove turbidity and therefore, will not improve the physical appearance of a water as does a filtration. Therefore, it is evident that hypochlorite treatment cannot be recommended as a permanent method of treating turbid water. A proper amount of hypochlorite added to a water destroys germs of the intestinal type and is an excellent safeguard even when used on unfiltered water.

The first hypochlorite plant in the state was installed last April, at the Great Falls City Water Works, by the city engineer. The second plant was put in at the Boston and Montana Smelter, to treat the water furnished from the Missouri river to residents of Little Chicago. The Montana Water Company at Billings adopted the plan soon afterward and have been running their plant since last May.

In all the plants some difficulties were experienced with

odors and tastes at first, which now have been almost entirely overcome by careful operation. Tests made in the laboratory show that these plants are greatly improving the water treated and rendering them much safer for domestic use.

The most complete data has been secured in the operation of the plant at Billings. Below is printed the report of Mr. H. E. Morris, who made the efficiency test when the plant first started. During the winter months much less hypochlorite has been used than was necessary in the trial tests and the results are apparently satisfactory.



..BACTERIOLOGICAL TEST OF HYPOCHLORITE.. PLANT,

Montana Water Company, Billings, Montana.

The source of the Billings City water is the Yellowstone river. The water from the river flows through a canal for a mile or more into a storage and settling basin of about eight million gallon capacity. From this basin it goes into the rotary pumps where it is forced into the distributing system. The calcium hypochlorite is added to the water after it leaves the storage basin, but before it enters the pumps.

When the calcium hypochlorite plant was installed a few months ago for the purification of the city water supply, bacteriological tests were made to determine the efficiency. In this test very definite and conclusive results were obtained. The plant used was a small one consisting of a mixing tank, two storage tanks and a regulation tank, the feed being regulated by an air control from the storage tank.

The plant was put in operation Monday afternoon, June 16, 1913, using ten pounds of calcium hypochlorite to about one million gallons of water and the first bacteriological test was run on Wednesday morning. The results of this test show a decrease of about 81% of the bacteria between the raw water and the water as drawn from the city tap. The decrease is not entirely due to the chemical treatment, but is the combined result of settling in the storage basin and the action of calcium hypochlorite.

Each day the amount of calcium hypochlorite was increased two pounds, and bacteriological tests were made, the results are recorded in the following table. The percentage decrease is

figured from the raw and the tap water, no special consideration being given to the decrease of bacteria due to settling in the basin.

TEST OF BILLINGS WATER SUPPLY
From June 18-June 23, 1913

Sample	Time Collected	Average No. Bac. per C. C.,	Per Cent Decrease Between Raw and Tap Water.....	Amt. of Cal. Hypo. Added.....
Intake.....	June 18. 10:45 A. M.,	2250	.....
Tap.....	June 18. 12:00 M.	430	80.9%	10 pounds
Tap.....	June 19. 7:15 A. M.	380	83.1%	
Intake.....	June 20. 4:20 P. M.	2100	.....	12 pounds
Pump.....	June 20. 4:23 P. M.	200	.....
Tap.....	June 20. 5:30 P. M.	240	88.6%	
Intake.....	June 21. 11:48 A. M.	2000	.....	14 pounds
Pump.....	June 21. 11:45 A. M.	60	.....
Tap.....	June 21. 1:40 P. M.	140	93.0%	
Intake.....	June 22. 10:40 A. M.	3400	.....
Suction.....	June 22. 10:35 A. M.	1600	.....
Tap.....	June 22. 5:30 P. M.	125	96.3%	16 pounds
Intake.....	June 22. 10:30 A. M.	3300	.....
Suction.....	June 22. 10:35 A. M.	1700	.....
Pump.....	June 22. 10:40 A. M.	52	.....	18 pounds
Tap.....	June 22. 11:35 A. M.	202	93.9%	

Intake—Inlet from canal to settling basin.
Suction—Outlet from settling basin to pump.
Pump—Tap in pump room.
Tap—Faucet in room, Northern Hotel.

When one considers that the intestinal types of bacteria are rather susceptible to calcium hypochlorite, it is fairly safe to assume that a strength that would destroy from 90 to 95% of the total number of bacteria in a water, will kill most, if not all, of the intestinal types.

From a sanitary standpoint the results of this test show that if the calcium hypochlorite plant is operated steadily using from sixteen to eighteen pounds of the chemical to every million gallons of water, this water is much improved bacteriologically.

H. E. MORRIS,
Assistant Bacteriologist.

